What is claimed is:

1. An adjustment method for binocular magnifying glasses having a pair of magnifying glasses for right and left eyes, each of the pair of magnifying glasses having a magnifying optical system and a deflector deflecting an optical path of the magnifying optical system, comprising:

rotating the pair of magnifying glasses in directions opposite to each other using γ-rotation; and

correcting inclination of an image, caused by the γ-rotation, by rotating the pair of magnifying glasses in directions opposite to each other using the β-rotation,

given that rotation about each of axes X_L and X_R, which respectively correspond to visual axes of left and right eyes when an object distance is infinite in a condition of a primary position, is represented by the γ-rotation, and that rotation about each of axis Y_L and Y_R, which are respectively perpendicular to the axes X_L and X_R and are also perpendicular to a z-axis which perpendicularly intersects with the axis X_L at a position of the deflector for the left eye and the axis X_R at a position of the deflector for the right eye, is represented by the β-rotation.

2. The adjustment method according to claim 1,

wherein when an angle of the γ-rotation for each of the

right and left eyes is represented by $\gamma°$, and an angle of the β-rotation for each of the right and left eyes is represented by $\beta°$, said adjustment method satisfies a condition:

$$-0.50° < \varepsilon(\gamma)+\varepsilon(\beta) < 0.50° \quad \cdots\cdots(1)$$

where $\varepsilon(\gamma)=\gamma-\cos^{-1}\{1-\sin^2(90-\theta)\times(1-\cos\gamma)\}$, $\varepsilon(\beta)=\cos^{-1}\{1-\sin^2\theta\times(1-\cos\beta)\}$, and θ is a deflection angle (unit: degree) that the deflector deflects the optical path, except in a case where $\varepsilon(\gamma)=\varepsilon(\beta)=0$.

3. The adjustment method according to claim 1,

wherein when an angle of the γ-rotation for each of the right and left eyes is represented by $\gamma°$, and an angle of the β-rotation for each of the right and left eyes is represented by $\beta°$, said adjustment method satisfies a condition:

$$-0.33° < \varepsilon(\gamma)+\varepsilon(\beta) < 0.33° \quad \cdots\cdots(2)$$

where $\varepsilon(\gamma)=\gamma-\cos^{-1}\{1-\sin^2(90-\theta)\times(1-\cos\gamma)\}$, $\varepsilon(\beta)=\cos^{-1}\{1-\sin^2\theta\times(1-\cos\beta)\}$, and θ is a deflection angle (unit: degree) that the deflector deflects the optical path, except in a case where $\varepsilon(\gamma)=\varepsilon(\beta)=0$.

4. The adjustment method according to claim 1,

wherein when an angle of the γ-rotation for each of the right and left eyes is represented by $\gamma°$, and an angle of the β-rotation for each of the right and left eyes is represented by $\beta°$, said adjustment method satisfies a condition:

$$28.8\text{mm} < Z\gamma+Z\beta+\Delta P/2 < 35.2\text{mm} \quad \cdots\cdots(3)$$

where $Z\gamma = WD\times\sin\theta\times\tan\gamma$, $Z\beta = WD\times\cos\theta\times\tan(\beta-\beta/m)$, $\Delta P=2\{WD\times\cos\theta\times\tan(\beta(Z)/m)+25\times\tan\beta(Z)\}$, WD represents an object distance (mm), m represents an magnification of each magnifying glass, and $\beta(Z)$ represents 1/2 of an angle of convergence.

5. Binocular magnifying glasses: comprising:

a pair of magnifying glasses for right and left eyes,

each of said pair of magnifying glasses comprising:

a magnifying optical system; and

a deflector that deflects an optical path of said magnifying optical system,

wherein an adjustment of said binocular magnifying glasses has been performed in accordance with:

rotating the pair of magnifying glasses in directions opposite to each other using γ-rotation; and

correcting inclination of an image, caused by the γ-rotation, by rotating the pair of magnifying glasses in directions opposite to each other using the β-rotation,

given that rotation about each of axes X_L and X_R, which respectively correspond to visual axes of left and right eyes when an object distance is infinite in a condition of a primary position, is represented by the γ-rotation, and that rotation about each of axis Y_L and Y_R, which are respectively perpendicular to the axes X_L and X_R and are also perpendicular

to a z-axis which perpendicularly intersects with the axis X_L at a position of the deflector for the left eye and the axis X_R at a position of the deflector for the right eye, is represented by the β-rotation.

6. The binocular magnifying glasses according to claim 5,

wherein when an angle of the γ-rotation for each of the right and left eyes is represented by γ°, and an angle of the β-rotation for each of the right and left eyes is represented by β°, the adjustment is performed to satisfy a condition:

$$-0.50° < \varepsilon(\gamma)+\varepsilon(\beta) < 0.50° \quad \cdots\cdots(1)$$

where $\varepsilon(\gamma)=\gamma-\cos^{-1}\{1-\sin^2(90-\theta)\times(1-\cos\gamma)\}$, $\varepsilon(\beta)=\cos^{-1}\{1-\sin^2\theta\times(1-\cos\beta)\}$, and θ is a deflection angle (unit: degree) that the deflector deflects the optical path, except in a case where $\varepsilon(\gamma)=\varepsilon(\beta)=0$.

7. The binocular magnifying glasses according to claim 5,

wherein when an angle of the γ-rotation for each of the right and left eyes is represented by γ°, and an angle of the β-rotation for each of the right and left eyes is represented by β°, the adjustment is performed to satisfy a condition:

$$-0.33° < \varepsilon(\gamma)+\varepsilon(\beta) < 0.33° \quad \cdots\cdots(2)$$

where $\varepsilon(\gamma)=\gamma-\cos^{-1}\{1-\sin^2(90-\theta)\times(1-\cos\gamma)\}$, $\varepsilon(\beta)=\cos^{-1}\{1-\sin^2\theta\times(1-\cos\beta)\}$, and θ is a deflection angle (unit: degree) that the deflector deflects the optical path, except

in a case where $\varepsilon(\gamma)=\varepsilon(\beta)=0$.

8. The binocular magnifying glasses according to claim 5,

wherein when an angle of the γ-rotation for each of the right and left eyes is represented by $\gamma°$, and an angle of the β-rotation for each of the right and left eyes is represented by $\beta°$, the adjustment is performed to satisfy a condition:

$$28.8\text{mm} < Z\gamma+Z\beta+\Delta P/2 < 35.2\text{mm} \quad \cdots\cdots(3)$$

where $Z\gamma = WD\times\sin\theta\times\tan\gamma$, $Z\beta = WD\times\cos\theta\times\tan(\beta-\beta/m)$, $\Delta P=2\{WD\times\cos\theta\times\tan(\beta(Z)/m)+25\times\tan\beta(Z)\}$, WD represents an object distance (mm), m represents an magnification of each magnifying glass, and $\beta(Z)$ represents 1/2 of an angle of convergence.

9. Binocular magnifying glasses, comprising:

a pair of magnifying glasses for right and left eyes,

each of said pair of magnifying glasses comprising:

a magnifying optical system that has an objective lens with a positive power and an eyepiece with a positive power; and

a deflector that deflects an optical path of said magnifying optical system , said deflector located between said objective lens and said eyepiece,

wherein said deflector includes a first, second, third and fourth reflective surfaces, light incident on said deflector from said objective lens being reflected by said first, second,

third and fourth reflective surfaces in order of said first, second, third and fourth reflective surfaces to direct the incident light to said eyepiece and to make an erect image,

wherein when an angle, formed between an intersection line of said second and third reflective surfaces and a plane with which an intersection line of said first and fourth reflective surfaces perpendicularly intersects, is represented by an angle ψ which does not take a value of zero, and when rotation about each of axes X_L and X_R, which respectively correspond to visual axes of left and right eyes when an object distance is infinite in a condition of a primary position, is represented by the γ-rotation, and rotation about each of axis Y_L and Y_R, which are respectively perpendicular to the axes X_L and X_R and are also perpendicular to a z-axis which perpendicularly intersects with the axis X_L at a position of said deflector for the left eye and the axis X_R at a position of said deflector for the right eye, is represented by the β-rotation, if an angle of the γ-rotation and an angle of the β-rotation are respectively represented by $\gamma(°)$ and β $(°)$ with respect to a condition in which optical axes of said objective lenses for the right and left eyes are parallel with each other, said binocular magnifying glasses satisfies a condition:

$$-0.5° < 2\psi-\{\varepsilon(\gamma)+\varepsilon(\beta)\} < 0.5° \quad \cdots\cdots(4)$$

where $\varepsilon(\gamma)=\gamma-\cos^{-1}\{1-\sin^2(90-\theta)\times(1-\cos\gamma)\}$, $\varepsilon(\beta)=\cos^{-1}\{1-\sin^2\theta\times(1-\cos\beta)\}$, and θ represents a deflection

angle (unit: degree) that said deflector deflects the optical path.

10. The binocular magnifying glasses according to claim 9,

wherein the angle β of the β-rotation satisfies a condition:

$$0.9\times|\xi|-0.3 < |31.3\times\tan\beta| < 1.3\times|\xi|+1 \quad \cdots\cdots(5)$$

where ξ represents diopter (D) of said magnifying optical system.

11. The binocular magnifying glasses according to claim 9,

wherein said deflector has a first deflecting part in which said first and forth reflective surfaces are integrally provided, and a second deflecting part in which said second and third reflective surfaces are integrally provided,

wherein the angle ψ is formed by rotating the first deflecting part relative to the second deflecting part.

12. The binocular magnifying glasses according to claim 9, wherein said first, second, third and fourth reflective surfaces are mirrors, respectively.

13. The binocular magnifying glasses according to claim 9, wherein said deflector includes a prism having inner surfaces respectively functioning as said first, second, third and

fourth reflective surfaces.

14. The binocular magnifying glasses according to claim 13, wherein the prism is configured to be a roof prism whose roof surface is formed by said second and third reflective surfaces.

15. An adjustment method for binocular magnifying glasses having a pair of magnifying glasses for right and left eyes, each of the pair of magnifying glasses having a magnifying optical system and a deflector deflecting an optical path of the magnifying optical system, the magnifying optical system including an objective lens with a positive power and an eyepiece with a positive power, the deflector being located between the objective lens and the eyepiece,

said deflector including a first, second, third and fourth reflective surfaces, light incident on said deflector from said objective lens being reflected by said first, second, third and fourth reflective surfaces in order of said first, second, third and fourth reflective surfaces to direct the incident light to said eyepiece and to make an erect image,

when an angle, formed between an intersection line of said second and third reflective surfaces and a plane with which an intersection line of said first and fourth reflective surfaces perpendicularly intersects, is represented by an angle ψ which does not take a value of zero, and when rotation about each of

axes X_L and X_R, which respectively correspond to visual axes of left and right eyes when an object distance is infinite in a condition of a primary position, is represented by the γ-rotation, and rotation about each of axis Y_L and Y_R, which are respectively perpendicular to the axes X_L and X_R and are also perpendicular to a z-axis which perpendicularly intersects with the axis X_L at a position of said deflector for the left eye and the axis X_R at a position of said deflector for the right eye, is represented by the β-rotation, if an angle of the γ-rotation and an angle of the β-rotation are respectively represented by $\gamma(°)$ and β $(°)$ with respect to a condition in which optical axes of said objective lenses for the right and left eyes are parallel with each other, said adjustment method comprising:

rotating the pair of magnifying glasses in directions opposite to each other using the β-rotation to match optical axes thereof to visual axes of the eyes;

rotating the pair of magnifying glasses in directions opposite to each other using γ-rotation to adjust convergence; and

correcting inclination of an image by determining the angle ψ,

wherein said adjustment method satisfies a condition:

$$-0.5° < 2\psi-\{\varepsilon(\gamma)+\varepsilon(\beta)\} < 0.5° \quad \cdots\cdots(4)$$

where $\varepsilon(\gamma)=\gamma-\cos^{-1}\{1-\sin^2(90-\theta)\times(1-\cos\gamma)\}$,

$\varepsilon(\beta)=\cos^{-1}\{1-\sin^2\theta\times(1-\cos\beta)\}$, and θ represents a deflection angle (unit: degree) that the deflector deflects the optical path.

16. The adjustment method according to claim 15,

wherein the angle β of the β-rotation satisfies a condition:

$$0.9\times|\xi|-0.3 < |31.3\times\tan\beta| < 1.3\times|\xi|+1 \quad \cdots\cdots(5)$$

where ξ represents diopter (D) of the magnifying optical system.

17. The adjustment method according to claim 15,

wherein the deflector has a first deflecting part in which said first and forth reflective surfaces are integrally provided, and a second deflecting part in which the second and third reflective surfaces are integrally provided,

wherein the angle ψ is formed by rotating the first deflecting part relative to the second deflecting part before the first and second deflecting parts are cemented to each other.

18. The adjustment method according to claim 15, wherein said first, second, third and fourth reflective surfaces are mirrors, respectively.

19. The adjustment method according to claim 15, wherein the deflector includes a prism having inner surfaces respectively functioning as said first, second, third and fourth reflective surfaces.

20. The adjustment method according to claim 19, wherein the prism is configured to be a roof prism whose roof surface is formed by the second and third reflective surfaces.

21. A prism used for binocular magnifying glasses, comprising a first, second, third and fourth reflective surfaces, an intersection line of said second and third reflective surfaces forming an angle ψ, which does not take a value of zero, with respect to a plane with which an intersection line of said first and fourth reflective surfaces perpendicularly intersects.